

Name Key

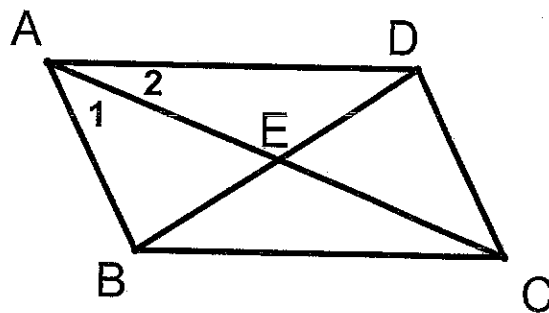
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## 202 Chapter 8 Test Review/Bonus assignment

Complete the following problems. Show all work to receive full credit.

p452-456 #s 1-8, 15-20, 24, 34, 37

p457 #s 14, 15

p770 8.5 #s 1-8 (Additionally, for #s 1-4, use sohcahtoa to find  $\frac{1}{2}$  SQ. For #s 5-8, find AB; round to the nearest tenth.)~~p771-8, 7 #s 2, 3~~Use the **parallelogram** ABCD to the right. Determine if the statements are **always**, **sometimes**, or **never** true.(The parallelogram to the right is to help you visualize. It is not drawn to scale. **DO NOT** make any assumptions about its measurements.)

1. A If  $AD = DC$ , then ABCD is a rhombus.
2. A If  $AC = BD$ , then ABCD is a rectangle.
3. S If  $AE = CE$ , then ABCD is a rectangle.
4. S If  $AC \perp BD$ , then ABCD is a rectangle.
5. SA If  $\angle 1 \cong \angle 2$ , then ABCD is a square.

- p452
1. T
  2. T
  3. F; Rectangle
  4. T
  5. F; trapezoid
  6. F; Rhombus
  7. T
  8. T

15.  $52^\circ$   $\frac{20}{132}$
16.  $AF = 6.86$
17.  $m\angle BDC = 87.9^\circ$   $\frac{180}{128} - \frac{52}{128} = \frac{128}{82.9}$
18.  $BC = 9$
19.  $CD = 6$
20.  $m\angle ADC = 128$   $\frac{180}{52} - \frac{52}{128}$

$$24. AF = \frac{1}{2} AC$$

$$(2x+7) = \frac{1}{2}(9x-1)$$

$$2(2x+7) = 9x-1$$

$$4x+14 = 9x-1$$

$$15 = 5x$$

$$3 = x$$

$$\textcircled{AF = 13}$$

$$34. 57 = \frac{1}{2}(21 + JM)$$

$$114 = 21 + JM$$

$$\textcircled{93 = JM}$$

$$37. (3a, c)$$

p457 14, 15



14. A(12,0) B(6,-6) C(0,0) D(6,6)

$$\overline{AC} \quad m = \frac{0-0}{0-12} = \frac{0}{-12} = 0$$

Rhombus

$$AC = \sqrt{(-12)^2 + 0^2} = 12 \quad \text{Rectangle}$$

$$\overline{BD} \quad m = \frac{6-(-6)}{6-6} = \frac{12}{0} = \text{undef}$$

$\perp$  diagonals

$$BD = \sqrt{0^2 + 12^2} = 12 \quad \cong \text{diagonals}$$

Rhombus, Rectangle, Square

15. A(-2,4) B(3,6) C(12,4) D(5,2)

$$\overline{AC} \quad m = \frac{4-4}{12-(-2)} = \frac{0}{14} = 0$$

$\perp$  diagonals  
Rhombus

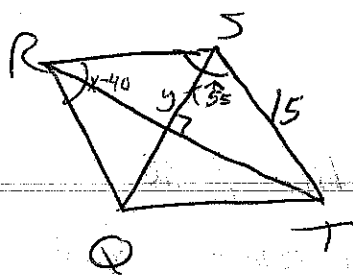
$$AC = \sqrt{14^2 + 0^2} = 14$$

$$\overline{BD} \quad m = \frac{6-2}{5-5} = \frac{4}{0} = \text{undef}$$

$$BD = \sqrt{0^2 + 4^2} = 4$$

$\neq$   
Not Rectangle

p770 8.5 1-8

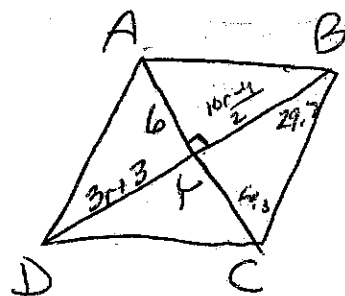


$$\begin{aligned} x + x - 40 &= 180 \\ 2x &= 220 \\ x &= 110 \end{aligned}$$

$$1. \quad m\angle TSQ = \frac{1}{2} 110 = 55 \quad 2. \quad m\angle QRS = 70$$

$$3. \quad m\angle SRT = \frac{1}{2} 70 = 35 \quad 4. \quad QR = 15$$

$$\begin{aligned} 70 \\ \text{Extra } \cos 55 &= \frac{y}{15} \\ y &= 8.6 \end{aligned}$$



$$\begin{aligned} \frac{3r+3}{1} &= \frac{10r-4}{2} \\ 10r-4 &= 6r+6 \\ 4r &= 10 \\ r &= 2.5 \end{aligned}$$

$$\begin{aligned} 5. \quad m\angle ACB &= 60.3^\circ \quad \tan x = \frac{10.5}{6} \\ x &= 60.3 \end{aligned}$$

$$6. \quad m\angle ABD = 29.7^\circ$$

$$7. \quad BY = 10.5$$

$$8. \quad AC = 12$$

$$\begin{aligned} \text{Extra } AB &= 12.1 \quad 6^2 + 10.5^2 = AB^2 \\ 12.1 &= AB \end{aligned}$$